

United City of Yorkville: City Parkway Tree Survey project

The United City of Yorkville is located in Kendall County. In February 2009, the United City of Yorkville's City Council approved a 50/50 Parkway Tree Planting Program aimed at improving the quality of life in the city by bringing quality trees that would provide shade, screening, wildlife habitat, pollution control, reduced water runoff, soil erosion control, increased property values, reduced stress, beautiful aesthetics, and a general sense of well-being in the community. To develop an effective implementation strategy for the 50/50 Parkway Tree Planting Program, the City of Yorkville successfully applied for a community planning grant from CMAP. Through the Full Circle expansion and enhancement initiative, the city received a \$21,850 grant to build its mapping infrastructure and upgrade its technology for community mapping.

The City's Community Development Department used CMAP's Full Circle mapping tools to create an inventory of trees in the parkway system and map their attributes. The City hired two interns who were knowledgeable in tree identification. They were able to survey between 150-250 trees per day. In addition to capturing the coordinates of tree locations, the surveyor documented other attributes of each tree including:

- Tree species
- Current tree caliper size
- Current health and conditions of the tree
- Current land use of property
- Presence of overhead utility lines

The city borrowed CMAP's survey grade-level GPS equipment to supplement their data collection tools. GPS units were used in the project because they can accurately capture the location of trees using geographic coordinates which is better than trying to link the trees to parcel addresses. Using the Full Circle mapping resources, the city has mapped trees on over 80% of its street network. In order to build local mapping capacity, the city used its technology upgrade grant to purchase its own state-of-the art Topcon GMS-2 pro GPS equipment for maintaining and updating the database regularly. City planners have been able to capture information that they are using to prepare an informed action plan for the 50/50 Parkway Tree Planting Program

Results

The City of Yorkville is nearing completion of its tree survey project funded by the Full Circle Grant. The product of this survey has been data attributes which will be included in the city's GIS database. The data output will include the [location](#), [caliper size](#), [species](#) and condition of all parkway trees in the city as well as all trees on city properties, including public buildings and park space. The plan will help pinpoint locations for new trees, determine trees of marginal health that need to be monitored, identify trees that need to be removed, and develop a tree preservation/canopy and landscaping ordinance. [Preliminary results](#) have determined that, of the 100% of data collected (8,811 trees to date), 46% of the existing trees are Pear, Autumn Blaze Maple, Sugar Maple, or Ash.

Outcome

The information collected will allow the City of Yorkville to more efficiently manage the existing tree canopy by identifying gaps along parkways where trees should be planted, identifying trees in need of (or

soon to be in need of) removal, and identifying the species to enable the city to better assess the scope of future disease susceptibility (such as emerald ash borer). The survey will also enable the city to quantify the diversity of tree species and to ensure future plantings will increase this diversity. In addition, this project will assist the city in realizing its objective of becoming a Tree City in the USA.

Due to the survey data already collected, the 50/50 Parkway Tree Program, which was established in 2008, is being modified to no longer offer Ornamental Pears or Sugar Maples as options for street trees to be planted under the program. This is due to the intense quantity of existing trees of these varieties in the landscape plans that have been previously approved for developments. The objective of this program is to provide trees at a reduced rate to be planted by the city to increase species variety and re-establish street trees that have died, been damaged, or removed. The city is focused on creating habitat diversity throughout the city, in addition to not allowing future diseases or pests to severely damage a majority of the city's trees.

Although the city will still allow other maple varieties and pear varieties (Autumn Blaze and Ash trees were removed from the Landscape Ordinance approved shade tree list in 2006), planning staff will be discussing with the City Council the potential of only allowing 5% - 10% of the species in future developments to be Sugar Maple or Pears (for new landscape plans). Currently, no more than 33% of any development may be one genus of trees. This means that you cannot have 100% of the trees to be three different types of maple (Sugar Maple, Red Maple, and Norway maple), but instead they must be of different genus such as Oak, Linden, Maple, Elm, etc.

The data has also prompted the Mayor of Yorkville (Mayor Burd) to initiate a meeting with a tree care company to discuss preservation methods for the city's [Ash trees](#). Using the GIS data, the city planners can determine developments that would be most affected by the Emerald Ash Borer, the size of species that would be affected, and determine which [Ash trees](#) should be targeted for preservation. Thus the Full Circle mapping tools have been effective in supporting the City of Yorkville's goals of providing quality trees and the environmental benefits of trees to all community residents.